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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,976	12/01/2003	Bill Arndell	WUR 50906/US/2	1877

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EXAMINER	
YAO, SAMCHUAN CUA	
ART UNIT	**PAPER NUMBER**
1733	

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/724,976	ARNDELL ET AL.	
	Examiner	Art Unit	
	Sam Chuan C. Yao	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 August 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17 and 21-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17 and 21-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-13 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 95/10555 A1 in view of Kunkel et al (US 4,420,510) and 4-H Woodworking Going For the Gold Questions copy right (C) 1994.

WO '555 discloses a process for making laminated wood veneers. The process comprises providing at least a pair of wood veneers; coating at least one of the pair of wood veneers with a moisture curable adhesive comprising polyisocyanate; compressing the pair of adhesive coated wood veneers; and curing the adhesive (abstract; page 1 lines 7-27; page 3 lines 7-32; page 4 lines 1-5; pages 10-12).

While not explicitly stated, it is understood that the adhesive coated veneers are compressed together using a pressing means. Otherwise, it would be difficult if not impossible to press the veneers at a pressure range of up to 200 psi (page 12 lines 11-22). In any event, such would have been obvious in the art as such is an art recognized effective way for adhesively bonding veneer layers to together. While WO '555 teaches coating a wood veneers using "in any conventional manner" (page 12 lines 3-10), WO '555 does not teach conveying one of the pair

of wood veneers through a ribbon coating apparatus to coat the wood veneer with polyisocyanate adhesive ribbons. However, such would have been obvious in the art, because Kunkel et al discloses the desirability of conveying a wood veneer through a adhesive strand coating means and coating the wood veneer with a plurality of adhesive strands (abstract; col. 1 lines 7-58; figures 2-3, 10A-11B).

Neither WO '803 nor Kunkel et al teaches orienting veneers with concave surfaces facing in opposite directions. However, it is a natural characteristic for wood veneers to warp or to cup. It would have been obvious in the art to orient veneers with concave surfaces facing in opposite directions, because it is suggested in 4-H Woodworking to orient wide wood boards such that the *"annual rings on the end grain go in opposite directions, i.e. one curving up, the next curving down."* in order to reduce warping or cupping of wood boards (page 4 answer to question number 26).

With respect to claims 2-5, see page 1 lines 19-26; page 3 lines 7-21; page 10 lines 16-23; page 11 lines 8-14; and, page 15 lines 14-16 of the WO '555 publication.

With respect to claims 6-13, see page 5 line 15 to page 7 line 32 of the WO '555 publication.

With respect to claim 21, Kunkel discloses that the use of foamed adhesive reducing the amount of adhesive, which is needed for bonding wood veneers (col. 1 lines 6-18). Moreover, one in the art would have determined an optimal

amount of adhesive which is needed to effectively bond a pair of veneers thereby reducing the adhesive cost.

With respect to claims 22-23, see figures 10A to 11B of the Kunkel patent.

3. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references set forth above as applied to claim 6 or 7 above, and further in view of either Robitschek et al (US 4,403,013) or National Evaluation Report (dated 11-2002) on LINESTAR™ Adhesives such as LINESTAR™ 4800 adhesive.

See page 5 lines 15-27 and claim 20 of the WO '555 publication for discussion on the amount of NCO which is present in an isocyanate-terminated prepolymer. As for the viscosity range recited in claims 14-15, it should be noted that, the viscosity recited in these claims cover over a very wide range. Equally important, absent any showing of unexpected benefit, one in the art would have determined, by routine experimentation, a suitable viscosity to obtain desired flow characteristic of an adhesive. One in the art would have ensured that the adhesive in a modified process of WO '555 has a sufficiently high viscosity so that adhesive can be applied in a form of strands, but low enough that it is able to spread substantially uniformly around a veneer surface when a pair of veneers are compressed together. it would have been obvious in the art to formulate an adhesive such that its viscosity is at least around 1000 cps, because Robitschek et al, drawn to a process of making plywoods, teaches the desirability of formulating a foamable adhesive such that its adhesive is around 1000-20,000 cps (abstract; col. 1 lines 9-50). **Alternatively**, it would have been obvious in the

art to use a LINESTAR™ 4800 adhesive in making an engineered lumber from wood veneers, as such is an art recognized effective adhesive for fabricating LVL composite, as exemplified in a disclosure in National Evaluation Report on LINESTAR™ Adhesives, wherein this adhesive is similar to the one taught by WO '555. Since a LINESTAR™ 4800 adhesive has a viscosity of 3000 cps, it would have been obvious in the art to formulate moisture curable isocyanate adhesive such that it has a viscosity of around 3000 cps.

As for the pressing temperature range recited in claims 16-17, see page 10 lines 16-23 of the WO '555 publication.

Response to Arguments

4. Applicant's arguments with respect to claim 1 has been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richard Crispino can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sam Chuan C. Yao
Primary Examiner
Art Unit 1733

Scy
09-02-06